



NASA ASRS Program Overview

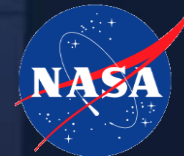
February 7, 2018

Linda Connell

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Human Systems Integration Division

**AVIATION SAFETY
REPORTING SYSTEM**



Moffett Field - Hangar One
1932



ASRS since 1976



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**AVIATION SAFETY
REPORTING SYSTEM**

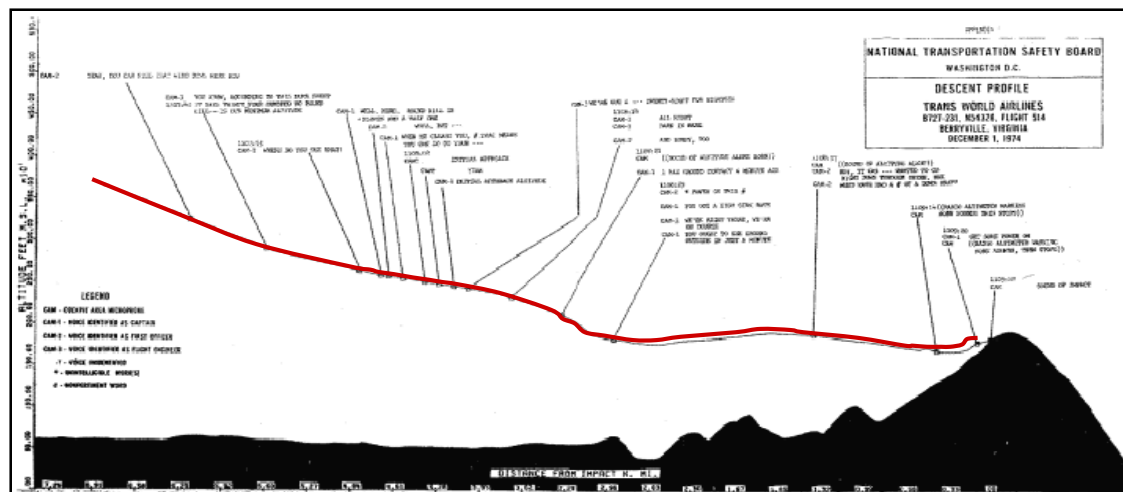
Anniversary

1976-2016

Over 1.3 Million Reports

ASRS History

- The ensuing investigation revealed that six weeks prior, a United Airlines crew had experienced an identical ATC misunderstanding and narrowly missed the same mountain.
- At the time there was no method of sharing the United pilot's experience with TWA and other airline operators.
- This solidified the idea of a national aviation reporting program that would enable information sharing.
- In April 1976, NASA and FAA implemented the Aviation Safety Reporting System (ASRS)



What is Safety Reporting?



Aviation Safety Reporting System

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System-Wide Event Occurrences

- ASRS is complementary to other systems of reporting and focuses on precursors to the most severe events



Linking Risk Assessment and Risk Management



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Risk Management

- Risk Management Encompasses:
 - Risk Assessment
 - Risk Mitigation
 - Evaluation of Residual Risk
 - Risk Acceptance

*Confidential Reporting Model Has
Specific Contributions to:
Risk Assessment*



Nine Steps of Risk Assessment

- 1) System Characteristics
- 2) Threat Identification
- 3) Vulnerability Identification
- 4) Control Analysis
- 5) Probability Determination
- 6) Impact Analysis
- 7) Risk Determination
- 8) Control Recommendations
- 9) Results Documentation

ASRS Gov't/Industry Stakeholders

- **FAA provides reimbursable funding to NASA for ASRS support through Interagency Agreement**
- **NASA provides funding for Director to provide overall management**
 - Assures independence and confidentiality
 - Reinforces role of trust in success
- **The Aviation Community provides support through aviation community advocacy for reporting, feedback, and communications**



ASRS Purpose and Mission Mandate

Identify deficiencies and discrepancies in the National Airspace System

Provide data for planning and improvements to the future National Airspace System



Mandated scope in original Federal Register Notice, FAA Advisory Circulars, FAA/NASA MOA(s) and IAA(s). Largely determines program priorities.

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ASRS Principles

VOLUNTARY PARTICIPATION

Aviation personnel voluntarily submit reports concerning events related to safety for the purpose of system alerting, understanding and learning

CONFIDENTIALITY PROTECTION

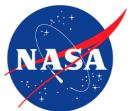
Protection of identity is provided by NASA through de-identification of persons, companies, and any other identifying information

NON-PUNITIVE

FAA will not use, nor will NASA provide, any report submitted for inclusion under ASRS guidelines or information derived therein for use in any disciplinary or other adverse action (14 CFR 91.25 & AC 00-46E)

INDEPENDENT

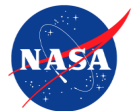
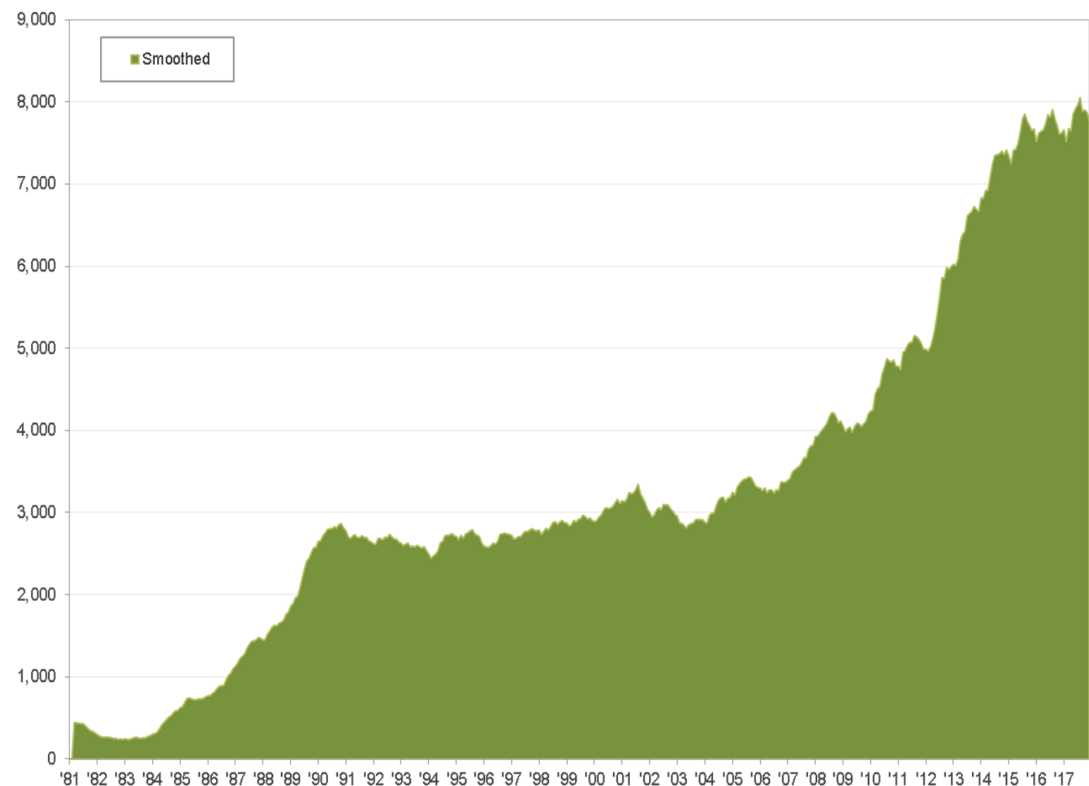
Necessary for trust building and unbiased dissemination of safety information



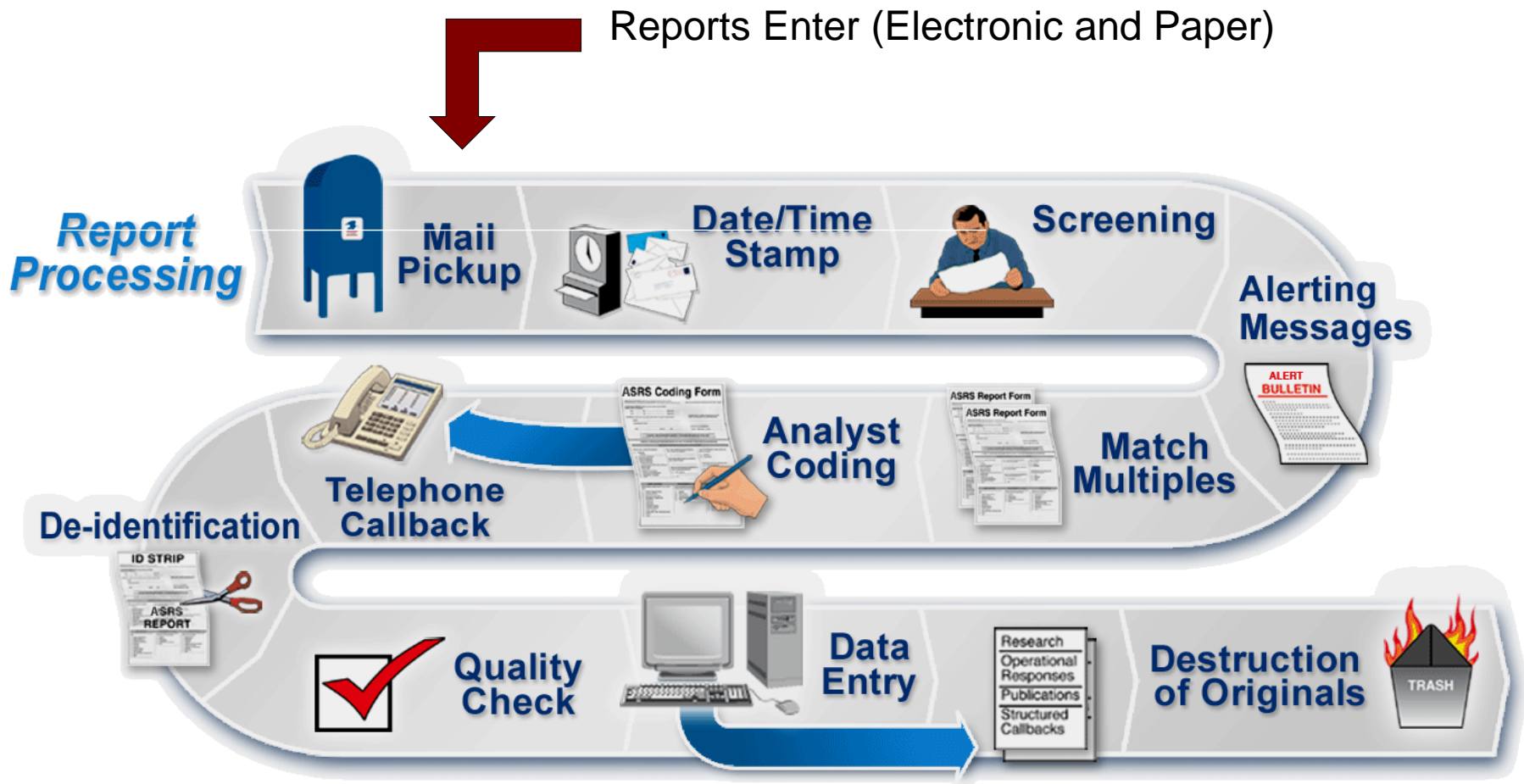
ASRS Report Volume Profile

- Over 42 years of confidential safety reporting
- Over 1,435,000 reports received
- Over 6,300 alert messages issued
- Over 7,664 reports per month, or 366 per working day
- Total report intake for 2017 was 94,302

Monthly Intake
January 1981 – December 2017

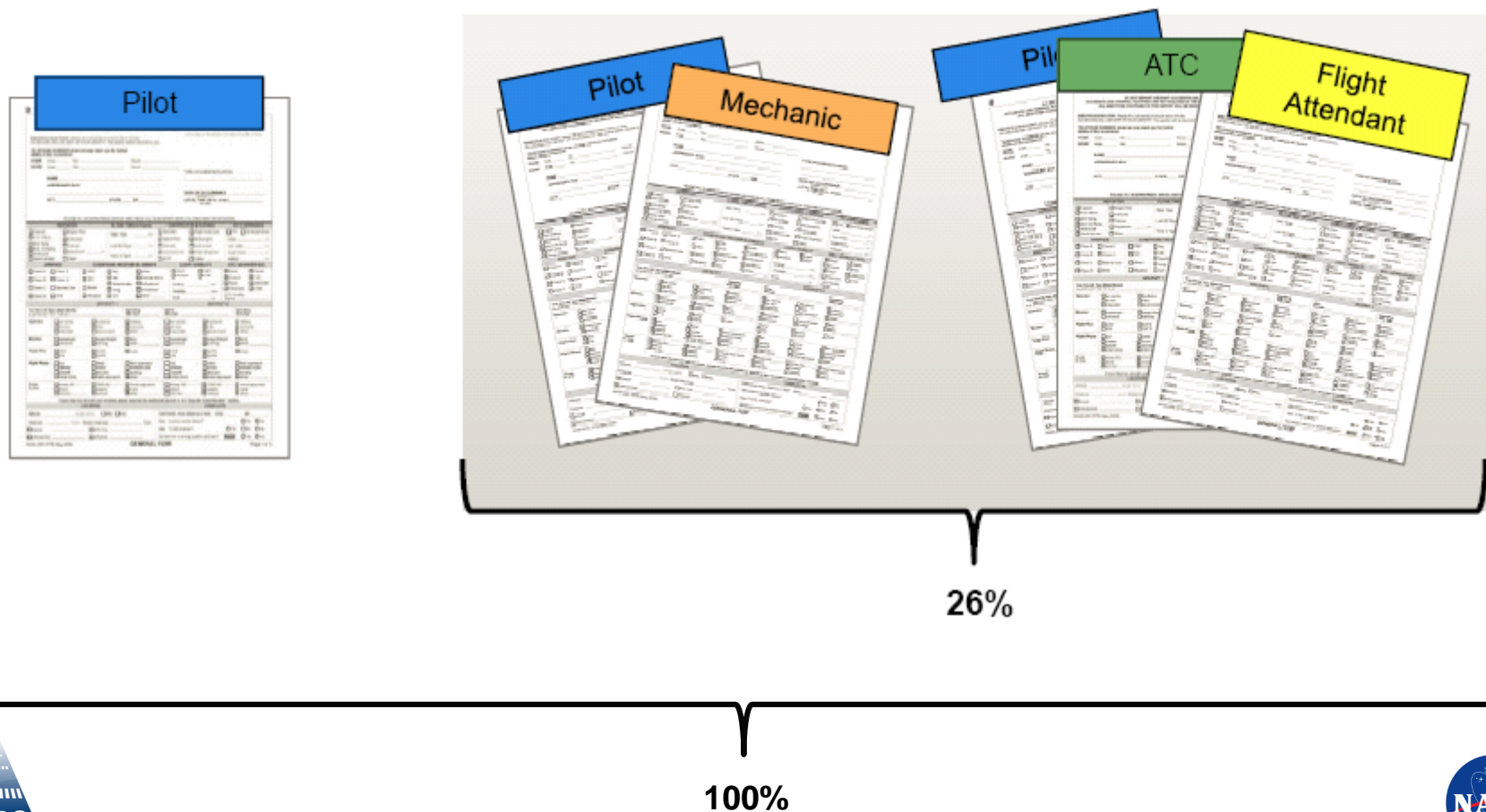


Report Processing Flow



Incidence of ASRS Multiple Reports

- Provides information from more than one person's perspective on a single event



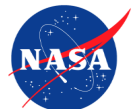
Report Processing Flow



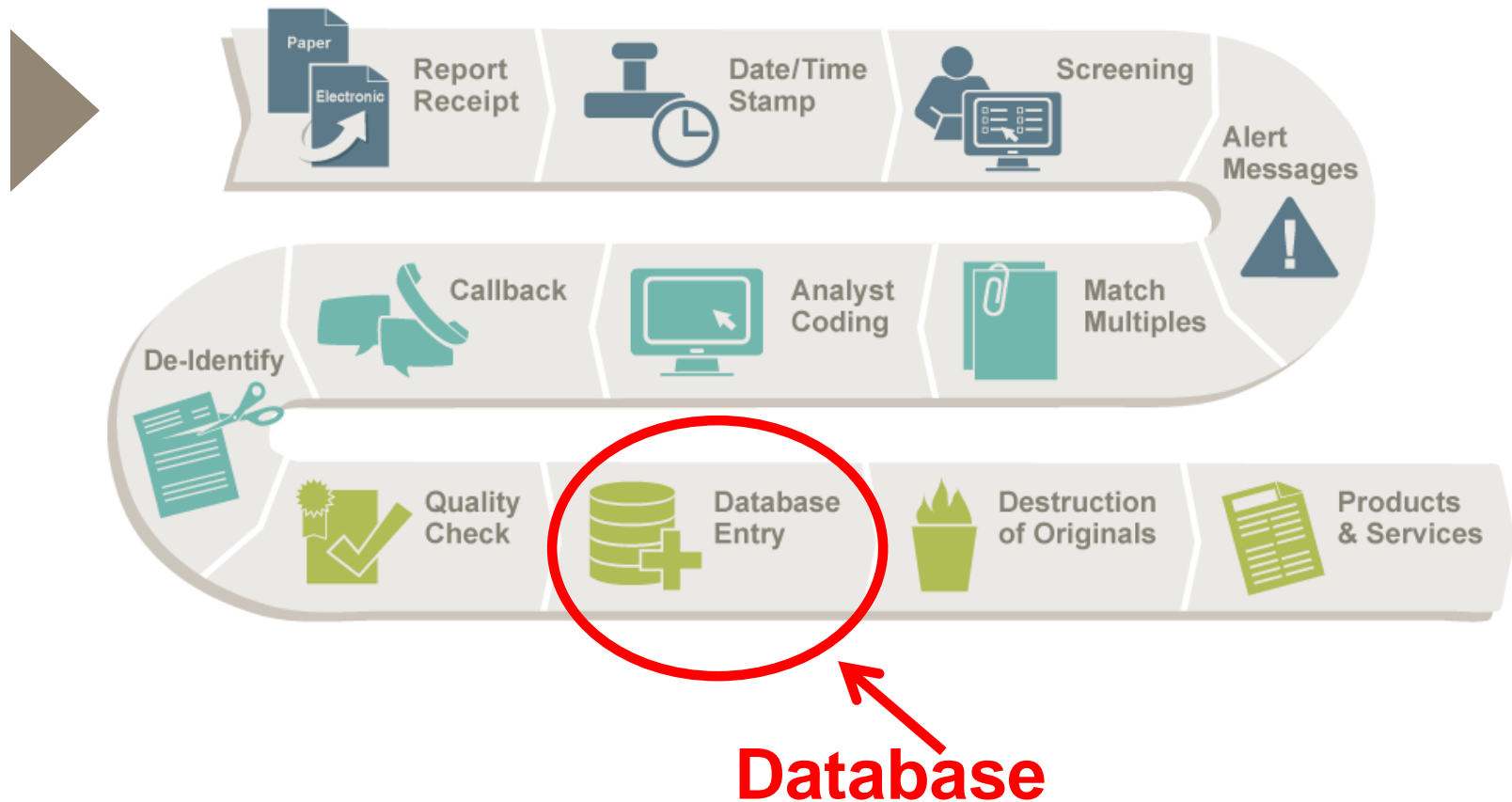
Alert Responses

(2006 – 2015)

Response	Percentage	62%
T. Action taken as a result of the AB/FYI	21%	
B. Action initiated before AB/FYI received	15%	
I. Action initiated in response to AB/FYI but not completed	11%	
N. Addressee agrees with AB/FYI but sees no problem	7%	
U. Issue raised by AB/FYI under investigation	5%	
H. Addressee in factual agreement but is unable to resolve	3%	
W. Addressee disputes factual accuracy of AB/FYI	22%	
Q. Information in AB/FYI insufficient for action	12%	
C. Action not within addressee's jurisdiction	3%	
F. For information only, no response expected	1%	



Report Processing Flow





Aviation Safety Reporting System

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Confidential. Voluntary

ASRS captures confidential reports, analyzes the resulting aviation safety data, and disseminates vital information to the aviation community.

CALLBACK

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NOTAM Issues

July 2015, Issue 426

[HTML](#) | [PDF](#)

Select a Form To Submit a Report



- ▶ [General](#) - Pilots, Dispatchers, Others
- ▶ [Air Traffic Control](#) - Air Traffic Controllers
- ▶ [Maintenance](#) - Mechanics
- ▶ [Cabin](#) - Cabin Crew

How to Report Online

Review proper browser settings, security tips, and provisions.

- ▶ [FAQ for Electronic Report Submission](#)
- ▶ [Online Security Tips](#)
- ▶ [Immunity Policy](#)

View Program Briefing

Learn more about ASRS such as report processing and reporting metrics.





ASRS Model Applied to Aviation & Other Industries

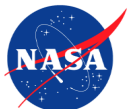
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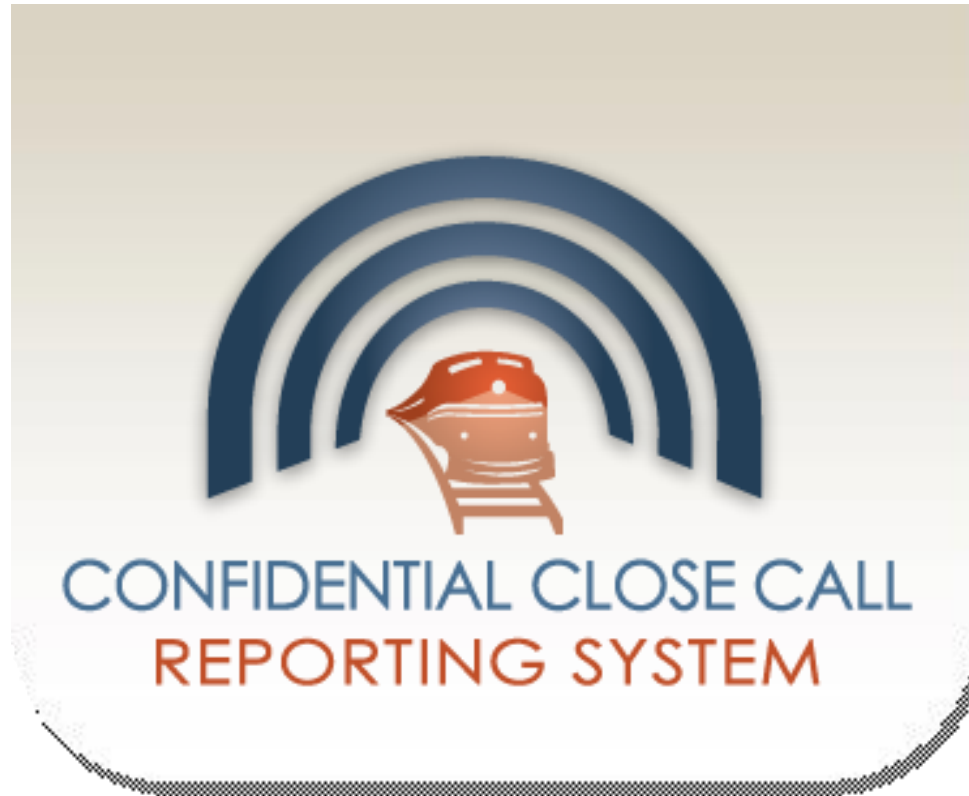


ASRS Model Applied

- **International Confidential Aviation Safety Systems (ICASS)**
 - 12 other countries have ASRS-type reporting systems in their nations
 - ICAO Annex 19 includes national confidential reporting system as Standard to member states
- **Confidential Close Call Reporting System (C³RS)**
 - ▶ Railroad Safety Reporting System was modeled after ASRS
 - ▶ Under Interagency Agreement between NASA ASRS and Federal Rail Administration (FRA) – May 2010



NASA ASRS and Federal Railroad Administration Interagency Agreement signed on May 21, 2010

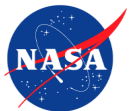


C³RS



Aviation Safety Reporting System

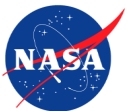
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Why Safety Reporting is Essential for Safety?



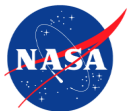
Aviation Safety Reporting System



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WHY CONFIDENTIAL REPORTING WORKS

- When organizations want to learn more about the occurrence of events, the best approach is simply to ask those involved.
- People are generally willing to share their knowledge if they are assured:
 - > Their identities will remain protected
 - > There is no disciplinary or legal consequences
- A properly constructed *confidential, voluntary, non-punitive, independent* reporting system can be used by any person to safely share information

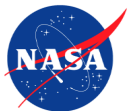


The ASRS is a

- Reporting System for Learning
- A System to Detect Safety Issues –
 - ✓ Sometimes “weak” signals
- A System for Hypothesis Generation
- A System for Quality Assurance Checks

BUT IT IS:

- NOT Whistleblowing Reporting System
- NOT Accountability/Enforcement System
- NOT Adversarial System
- NOT “Big Data” Reporting System



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